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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,363	09/28/2005	Huw David Summers	UDL-128	1517
36822 7590 12/13/2007 GORDON & JACOBSON, P.C. 60 LONG RIDGE ROAD SUITE 407 STAMFORD, CT 06902			EXAMINER TRAN, TAN N	
			ART UNIT 2826	PAPER NUMBER
			MAIL DATE 12/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/532,363

Applicant(s)

SUMMERS, HUW DAVID

Examiner

TAN N. TRAN

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on response filed on 01/11/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10,12,14-18 and 25 is/are pending in the application.
- 4a) Of the above claim(s) 3-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-,2,14-18,25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/12/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's communication filed on 01/11/07 has been carefully considered by the examiner. Examiner agreed that claims 1,2,14,15-18,25 are readable on figs. 2-8,11. Therefore, applicant's election of claims 1,2,14,15-18,25 is acknowledged.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

3. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

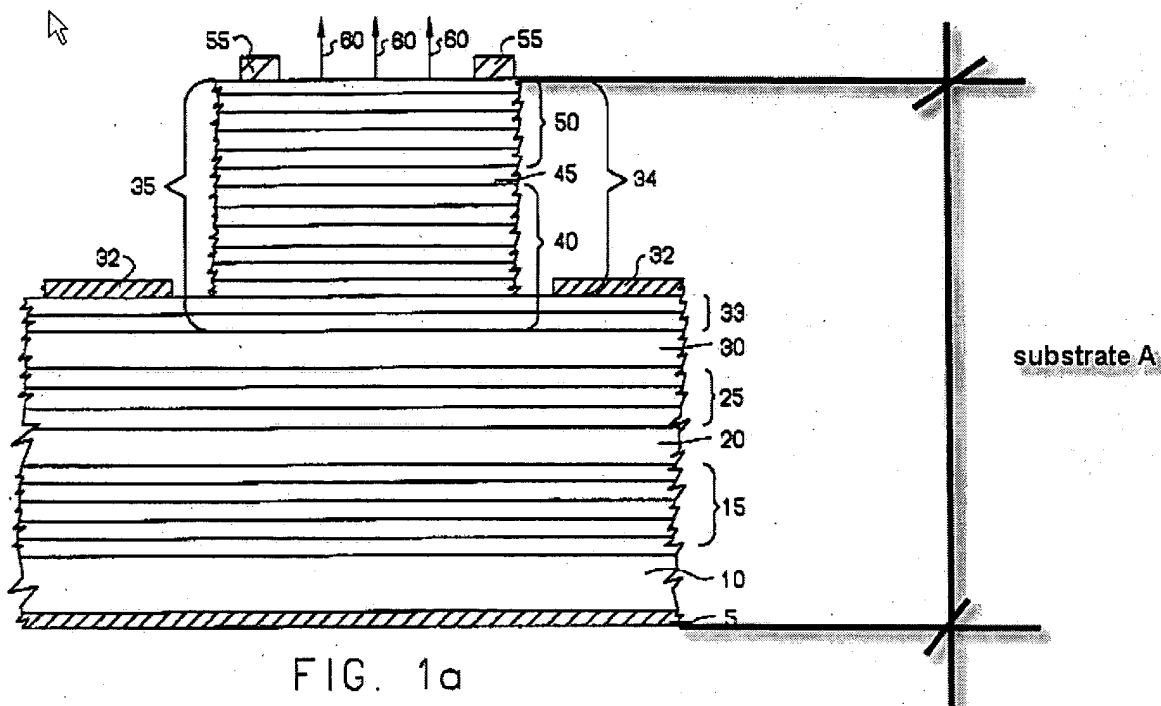
4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2,14,15,25 are rejected under 35 U.S.C. 102(b) as being anticipated by Swirhun et al. (5,606,572).

With regard to claims 1,2, Swirhun et al. disclose a semiconductor substrate (A as shown in attached fig); means for monitoring a characteristic of the device (lines 52-57, column 15); the device includes a resonant cavity light emitting element integrated as part of the substrate (A), comprising a reflector 35 through which light is emitted, the reflector 35 comprising a plurality of alternating layers of high and low reflective index material, a layer of absorbing material 45 being incorporating into with the reflector 35. (Note lines 35-40, column 5, figs. 1-3b of Swirhun et al.). It is inherent that Swirhun et al. discloses the absorbing layer 45 serving to absorbing light of a wavelength different from the light emitted by the light emitting element because absorbing layer has a smaller bandgap than the effective bandgap of the active region. (Note lines 54-57, column 5 of Swirhun et al.).



The applicant's claims 1,2 do not distinguish over the Swirhun et al. reference regardless of the functions allegedly performed by the claimed device, because only the device per se is relevant, not the recited function of a semiconductor substrate having emitting light for incidence on an element and also responsive to light received from the element to affect an electrical property thereof and so alters its current-voltage characteristic, and function of monitoring means being arranged to monitor the current-voltage characteristic.

Note that functional language in a device claim is directed to the device per se, no matter which of the device's functions is referred to in the claim. See *In re Ludtke and Sloan*, 169 USPQ 563 at 567, and *In re Swinehart*, 169 USPQ 226, both of which make it clear that it is the patentability of the device per se which must be determined in a "functional language" claim and not the patentability of the function, and that an old or obvious device alleged to perform a new

function is not patentable as a device, whether claimed in "functional language" terms or not. Note that the above caselaw makes clear that in such cases applicant has the burden of showing that a prior art device that appears reasonably capable of performing the allegedly novel function is in fact incapable of doing so. See MPEP § 2114. See also *In re Schreiber*, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997) (Claim to a spout having "taper ... such as to by itself jam up the popped popcorn before the end of the cone and permit the dispensing of only a few kernels at a shake," anticipated by an oil can spout having the same shape as spout Applicant disclosed as being adapted for dispensing said only a few kernels) and *In re King*, 231 USPQ 136 (Fed. Cir, 1986) ("It did not suffice merely to assert that [the cited prior art] does not inherently achieve [the claimed function], challenging the PTO to prove the contrary by experiment or otherwise. The PTO is not equipped to perform such tasks") for discussions of the roles of examiner and applicant in determining when and how functional limitations distinguish a claim from prior art disclosing the same structure.

With regard to claim 14, Swirhun et al. disclose the absorbing layer 45 is undoped semiconductor region of the semiconductor substrate (A). (Note fig. 1a of Swirhun et al.).

With regard to claim 15, Swirhun et al. disclose the absorbing layer 45 is disposed between two groups of alternating high and low refractive index materials (40,50) which form the reflector 35. (Note fig. 1a of Swirhun et al.).

With regard to claim 25, Swirhun et al. disclose the light emitting element comprises one of a resonant cavity laser element. (Note lines 2-5, column 5 of Swirhun et al.).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swirhun et al. (5,606,572).

Swirhun et al. is silent that array of resonant cavity light emitting elements integrated as part the substrate, each resonant cavity light emitting element having the reflector and the layer of absorbing material, the array of resonant cavity light emitting elements arranged to operate independently of each other and with the monitoring means arranged for monitoring means arranged for monitoring a characteristic of each given light emitting element wherein the light emitting elements are arranged in a linear array and in a two-dimensional array. However, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention having array of resonant cavity light emitting elements integrated as part the substrate, each resonant cavity light emitting element having the reflector and the layer of absorbing material, the array of resonant cavity light emitting elements arranged to operate independently of each other and with the monitoring means arranged for monitoring means arranged for monitoring a characteristic of each given light emitting element wherein the light emitting elements are arranged in a linear array and in a two-dimensional array because such structure is conventional

in the art for forming a plurality of identical devices in order to perform function of integrated opoelectronic devices.

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAN N. TRAN whose telephone number is (571) 272-1923. The examiner can normally be reached on 8:30-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, PURVIS SUE can be reached on (571) 272-1236. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tan Tran (Au 2826)

Nov 2007


SUE A. PURVIS
SUPERVISORY PATENT EXAMINER